Remarks

This is a full and timely response to the final office action mailed April 21, 2010. Entry of the present amendments and reconsideration and allowance of the application and presently pending claims, as amended, are respectfully requested.

Present Status of Patent Application

Upon entry of this Amendment, claims 9-20 are pending in the present application. Claims 9-20 currently stand rejected. Pursuant to the present amendment, claims 1, 17, and 19 are amended.

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims. Support for the amendments to claims 1, 17, and 19 appears in paragraph [0053] of the specification describing the position of the elastomeric strand as substantially parallel and external to the hard yarn. Additional support can be found elsewhere in the specification, such as in paragraph [0050] and in Figs. 3A and B (especially as contrasted to Figs. 1A-1F, depicting the background art), describing and depicting the alignment of the elastomeric fiber(s) and hard yarn in the composite yarn as substantially parallel, and adjacent to each other, with the elastomeric fiber external to, as opposed to covered/surrounded by the hard yarns. Such alignment is depicted along the length of the aligned yarn. Thus, Applicant submits that no new matter has been added by way of the present amendment, and that a new search is not necessary.

In view of the new arguments/remarks set forth below, Applicant respectfully requests reconsideration of the present application.

Applicant's Response to Rejection of Claims Under 35 U.S.C. §103

Claims 9-20 have been rejected as obvious under 35 U.S.C. §103(a) in view of U.S. Patent No. 3,940,917 to Strachan ("Strachan"), as the primary reference, in combination with other references. Specifically, claims 9-20 have been rejected under Section 103 over Strachan in view of U.S. Patent No. 5,896,634 to Brodowski et al. ("Brodowski"), claims 9-10 and 12-20 have been rejected over Strachan in view

of Japanese Patent No. 4 733 754 to Nakatomi et al. ("Nakatomi"), claims 9-16 have been rejected over Strachan in view of U.S. Patent No. 3,719,664 to Hayes et al. ("Hayes"), claims 13-20 have been rejected over Strachan in view of Brodowski and further in view of U.S. Patent No. 3,867,242 to Miller ("Miller"), claims 13-20 have been rejected over Strachan in view of Nakatomi and further in view of Miller, and claims 13-16 have been rejected over Strachan in view of Hayes and further in view of Miller.

Each of these rejections is respectfully traversed on the grounds that the Examiner has failed to establish a *prima facie* case of obviousness because the references fail to disclose, teach or suggest every element of the present claims.

Claims 9-16

Independent claim 9, as amended is set forth below:

> 9. A composite yarn, comprising:
> at least one elastomeric fiber forming a strand with a total draft in a range from 1.2X to 6.2X of an original spun length of the strand;
> at least one hard yarn selected from the group consisting of: synthetic fibers, natural fibers and a blend of synthetic and natural fibers, wherein said hard yarn is ***aligned adjacent and substantially parallel*** to said strand to make an aligned yarn, ***wherein said strand is positioned adjacent, substantially parallel to and external to said hard yarn along the length of said aligned yarn***; and
> a dried or cured size material forming an adhesive that adheres the strand and hard yarn of the aligned yarn together.

[Emphasis Added] Applicant submits that the rejection of claim 9 under 35 U.S.C. §103 over Strachan in view of Brodowski, or, alternatively, in view of Nakatomi, or in view of Hayes should be withdrawn because Strachan alone, or in combination with the other references, fails to teach, disclose, or suggest each and every feature of independent claim 9 above. In particular, Strachan does not teach, disclose, or suggest the highlighted language set forth above, specifically, a composite yarn where the hard yarn is aligned adjacent and substantially parallel to an elastomeric strand such that the strand is positioned substantially parallel to and external to said hard yarn along the length of the aligned yarn.

In the Office Action, the examiner cites only Strachan as allegedly teaching a composite yarn having at least one elastomeric fiber forming a strand and at least one hard yarn wherein the hard yarn is aligned adjacent and substantially parallel to the strand to make an aligned yarn. However, ultimately, Strachan discloses a covered yarn produced by well-known entangling methods, where the elastomeric yarn is covered/surrounded by entangled hard yarns that are extensively braided and/or looped in many portions, and thus not substantially parallel to the elastomeric yarn along the length of the strand. In contrast, the present invention is directed to an alternative covered composite yarn, where the elastomeric strand is substantially parallel and adjacent but external to the hard yarns along the length of the strand and where the covering is provided by a size material.

The present claims require not only that the hard yarn and the elastomeric strand be aligned adjacent and substantially parallel to each other, but that they form an aligned yarn where the elastomeric strand is positioned external to the hard yarns. The claims also recite that the strand is so positioned along the length of the aligned yarn. It is clear from a review of the specification and the figures that the unique structure of the composite yarn of the present disclosure, with the substantially parallel and adjacent alignment of the elastomeric strand and the hard yarn(s), with the elastomeric strand positioned external to the hard yarns, is maintained along the length of the yarn. For instance the relationship between the hard yarn and the elastomeric strand is plainly evident as shown in Figures 3A and 3B. The hard yarns and the elastomeric strand as shown in Figures 3A and 3B are plainly set forth in a substantially parallel alignment, with the elastomeric strand 53 adjacent and external to the hard yarns 27.

This is in clear contrast to the covered elastic yarn of Strachan which describes and illustrates the elastic yarn as surrounded by hard yarns. In fact, Strachan repeatedly describes the multifilament covering yarns/hard yarns as being entangled "around" or "about" the elastic yarn (see, e.g., Abstract, Col. 2, lines 13-16; Col. 3, lines 61-64; Col. 4, lines 5-11, Col. 7, lines 34-42). Figures 3, 4, and 5 of Strachan clearly depict the elastomeric strand 1 as internal to (e.g., surrounded by) the hard yarns 20, which are entangled and positioned around the elastic yarn. Even in-

between the random braded zones, the hard fiber filaments of the Strachan yarn are described as "distributed about elastic yarn 1 so as to minimize contact between elastic yarn 1 and guide surfaces." (Col. 4, lines 21-25). Notably, in Col. 9, lines 10-19, the Strachan describes the composite yarn as follows:

> When composite yarn of the present invention is tensioned to a similar extent, it is found that ***hard fiber filaments are entangled completely around the elastic yarn at frequent intervals so that the entire periphery of the elastic core yarn is protected by hard fiber filaments*** at such zones. Furthermore, at least a few ***hard fiber filaments are randomly distributed about the elastic yarn between such zones***, furnishing substantial protection to the elastic yarn between the zones.

[Emphasis added]. Clearly, Strachan teaches only a composite yarn where the hard yarns cover and protect an elastic yarn along the length of the elastic yarn. Thus, the elastic yarn of Strachan cannot possibly be positioned external to the hard yarns as in the claims of the present disclosure. Further, to the presence of the random braided zones, the hard yarn is also not aligned adjacent and substantially parallel to the elastomeric strand along the length of the strand.

Strachan utilizes a conventional covering method, i.e., entangling the hard yarns around the elastic yarn to achieve the random braided covering. The composite yarn of the present disclosure does not utilize this conventional covering method; instead, the elastomeric strand is positioned substantially parallel and external to the hard yarns, covering by the hard yarns being unnecessary since covering is provided by the size material. As set forth in paragraph [0053] of the specification: "the elastomeric fibers **53** and the hard yarn **27** are adjacent and substantially parallel to one another before and after the size material is applied." This also provides evidence that this alignment and positioning of the elastomeric strand and the hard yarn is maintained along the length of the yarn, since the adhesive size material would maintain this alignment. The description of the methods of making the composite yarn of the present disclosure, such as illustrated in Fig. 2A, also provides evidence that the adjacent and substantially parallel alignment of the strand and the hard yarn in the aligned yarn would be maintained along the length of the strand, since the tensions employed over the length of the strand during the alignment

process and the subsequent application of the size material would then keep the strands substantially aligned along the length.

In response to the arguments provided in the currently outstanding and previous Office Actions, although the Office argues that Strachan teaches that portions of the composite yarn have an elastomeric strand and a hard yarn which are "substantially parallel" to each other, Strachan clearly provides no disclosure, teaching or suggestion of a composite yarn wherein elastomeric strand is positioned external to the hard yarns or where the strand and hard yarns are so positioned along the length of the strand, as in the present disclosure. Moreover, even the BPAI decision of 12/11/2009 indicates that Strachan only discloses a composite yarn that comprises ***portions*** where a hard yarn and an elastomeric strand are substantially parallel. Thus, since Strachan clearly requires random braided zones where the hard yarn is tightly entangled around the elastic yarn, Strachan cannot not teach or disclose, and arguably teaches away from, a composite yarn where the hard yarn and elastomeric strand are adjacent and substantially parallel along the length of the strand.

The remaining references, Brodowski, Nakatomi, and Hayes are each cited to show the combination of a yarn with a sizing material, and therefore, do not cure the deficiencies of Strachan with respect to teaching the elastomeric fiber strand aligned substantially parallel and external to the hard yarn along the length of the aligned yarn in establishing a *prima facie* case of obviousness.

Because independent claim 9 is allowable then, for at least this reason, claims 10-16, which include all of the limitations of claim 9 are also allowable. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claims 17-20

Independent claims 17 and 19, as amended, are set forth below:

> 17. An elastic woven fabric after final finishing, comprising:
> strands of bare, essentially untwisted elastomeric fibers in the weft that are substantially parallel, ***external,*** and adjacent to hard yarns in the weft.

19. An elastic woven fabric after final finishing, comprising:
strands of bare, essentially untwisted elastomeric fibers in the warp that are substantially parallel, ***external***, and adjacent to hard yarns in the warp, wherein the ratio of said elastomeric fibers to hard yarns in the warp ranges from 1:2 to 1:4

[Emphasis Added] Applicant submits that the rejection of claims 17 and 19 under 35 U.S.C. §103 over the combination of Strachan with any of Brodowski, Nakatomi, or Hayes and/or further in view of Miller should be withdrawn because Strachan alone, or in combination with the other references, fails to teach, disclose, or suggest each and every feature of independent claims 17 and 19 above. In particular, Strachan does not teach, disclose, or suggest the highlighted language set forth above, specifically, an elastic woven fabric after final finishing having strands of bare, essentially untwisted elastomeric fibers that are substantially parallel, external, and adjacent to hard yarns. Specifically, and for the reasons described above, the composite yarn of Strachan, when woven into a fabric and finished would not include strands of bares elastomeric fibers that are substantially parallel, external to and adjacent to hard yarns. First, the elastomeric fibers in fabric woven from the composite yarn of Strachan could not be bare because the elastomeric fibers of Strachan are clearly covered by the hard yarns, as expressly required in Strachan. Further, for the same reasons described above, the elastomeric fibers of the composite yarn and resulting woven fabric of Strachan would also not be parallel, external, and adjacent to the hard yarns. Although, in small portions, the elastomeric fibers in the Strachan yarn/fabric might be substantially parallel and adjacent to the hard yarns, the elastomeric yarn would not be external to the hard yarns, since Starchan requires that the hard yarns be entangled or positioned around or about the elastomeric yarn to cover the elastomeric yarn. Thus, Strachan clearly fails to disclose the elements of claims 17 and 19 above.

Strachan fails to disclose, teach or suggest a woven fabric after finishing with strands of bare elastomeric fibers that are adjacent, external to and substantially parallel to hard yarns which form an aligned yarn, and none of the other cited references remedies the deficiencies of Strachan in this regard. Thus, the combination of Strachan with any of the other references fails to establish a *prima*

facie case of obviousness. Therefore, reconsideration and withdrawal of the rejections under Section 103 are appropriate and respectfully requested.

Because independent claims 17, and 19 are allowable, then, for at least this reason, dependent claims 18 and 20 are also allowable. *In re Fine,* 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Further, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known.

If, in the opinion of the Examiner, a telephone conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney.

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Respectfully submitted,

Christina W. Geerlof

Christina W. Geerlof
ATTORNEY FOR
APPLICANTS
Registration No.: 45,690
Telephone: 302 683-3314
Facsimile: 302 683-3474